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Bixler et al.

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[54] ALKALI-SOLUBLE POLYMERS AND PROCESS FOR PRODUCING SAME

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Related U.S. Application Data

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[58] Field of Search 528/354, 355, 359; 525/386

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[57] ABSTRACT

A process for producing an alkali-soluble graft polymer is disclosed. The graft polymer has at least one main chain and a plurality of side chains attached thereto. The process comprises combining at least one vinylic monomer that is capable of forming free radicals, at least one ethylenically-unsaturated carboxylic acid monomer that is capable of addition-copolymerization with the vinylic monomer in the presence of the thus-formed free radicals, and cyclic ester molecules that are capable of ring-opening in the presence of the carboxylic acid monomer, to produce a polymerizable mixture. the polymerizable mixture to subjected to a pre-selected temperature and pressure for causing the monomers to free-radically addition-copolymerize to form the main chain while the cyclic ester molecules graft thereon, thereby forming the side chains of the graft polymer. The process is characterized in that the main-chain and side-chain formations of the graft polymer occur substantially simultaneously.

18 Claims, No Drawings